



**US Army Corps
of Engineers®**

Engineer Research and
Development Center

Coastal Engineering Manual

Technology

The *Coastal Engineering Manual* (CEM) is the U.S. Army Corps of Engineers' (USACE) comprehensive technical coastal engineering manual. It includes the basic principles of coastal processes, methods for computing coastal planning and design parameters, and guidance on how to formulate coastal flood studies, shore protection, and navigation projects.

Problem

During the past five decades, coastal engineering practice in the USACE and throughout most of the world has been based on the *Shore Protection Manual* (1974, 1984) and its predecessor, *Technical Report #4* (1954, 1957, 1961, 1966), which are now out of print. These manuals no longer reflect the most up-to-date technology and knowledge of coastal processes and engineering. The U.S. Government, through the [Coastal and Hydraulics Laboratory](#) (CHL), initiated preparation of the CEM in the mid-1990s, bringing in both in-house technical specialists and outside consultants who are all recognized experts in particular subject areas.



Erosion along the Morgan Peninsula, Alabama, shore is shown in the *Coastal Engineering Manual* to help illustrate coastal diversity around the United States

Expected Cost To Implement

The official CEM is a [USACE Engineering Manual](#). It is available from the Corps' Web page as a .pdf document that users can download and print on their own computers. This version, as with other Engineering Manuals, is available for free to the general public. These same .pdf files are also posted on the [CHL Web site](#). An interactive version was developed by [Veri-Tech, Inc.](#), a private company. This version is a commercial product based closely on the CEM and includes interactive functions, formulas, and examples and ties to other analytical tools.

Benefits/Savings

The CEM provides a standard for the formulation, design, and expected performance of a broad variety of coastal projects. This expanded replacement document provides a much broader field of guidance and is designed for updates as needed to reflect the state-of-the-art in coastal science and engineering.

Status

Parts I-IV and Appendix A were officially released as a USACE guidance document in 2002, and Part V was released in 2003. Part VI is scheduled to be completed in 2004.

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Distribution Sources The CEM can be downloaded as an Engineering Manual from the [USACE](#) or [CHL](#) Web sites free of charge. An enhanced electronic version can be purchased from [Veri-Tech, Inc.](#)

Available Training Coastal engineering classes, based on the CEM, are periodically offered at the Coastal and Hydraulics Laboratory. Contact Steven A. Hughes, CEERD-HC-P, (601) 634-2026, Steven.A.Hughes@erdc.usace.army.mil

Available Support Users who encounter errors are urged to contact the program manager or the appropriate part chairman (see <http://bigfoot.wes.army.mil/cem026.html>). At this time, support is not available through this program in designing or monitoring coastal projects.